

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

Claims 1-20 (canceled)

21 (new): A method for protecting traffic in a network against a failure, the method comprising:

provisioning a dedicated Management Control Flow ("MCF") in each of an active Path Protection Group ("PPG") and a corresponding protect PPG;

wherein the active PPG comprises only active Virtual Flows (VFs) along a first physical path and the corresponding protect PPG comprises a plurality of protect VFs that correspond to the active VFs in the active PPG, the protect PPG and the protect VFs contained therein taking a second physical path different from the first physical path taken by the active PPG;

wherein at least each active VF carries traffic between an ingress node and an egress node of the network;

sending protected traffic between the ingress node and the egress node via at least the active PPG;

receiving the protected traffic at the egress node via at least the active PPG;

generating a protection switching signal ("PSS") in response to detection of a failure in a path of an active VF;

transmitting the PSS in the dedicated MCF of the active PPG containing the active VF to at least one of the ingress node and the egress node; and

at least one of the ingress node and the egress node receiving the PSS and respectively switching at least one of the sending and the receiving of the protected traffic, from via the active PPG to via the protect PPG, in response to the PSS.

22 (New): The method of claim 21 wherein:

protected traffic is sent in parallel via both the active PPG and the protect PPG.

23 (New): The method of claim 22 wherein:

receiving of the protected traffic from via the active PPG is switched to via the protect PPG in response to receipt of the PSS in the dedicated MCF.

24 (New): The method of claim 21 wherein:

protected traffic is initially sent and received only via the active PPG; and
bandwidth is reserved in the protect PPG in an amount equal to that occupied by the protected traffic in the active PPG.

25 (New): The method of claim 21 wherein:

the network further comprises an intermediate node between the ingress node and the egress node;

at least one of the active PPG and the protect PPG pass through the intermediate node; and,

the detection of failure comprises at least one of the ingress, the intermediate, and the egress nodes detecting failure; and

the PSS is transmitted in the dedicated MCF of each of the active PPG and the protect PPG to at least one of the ingress node and the egress node.

26 (New): The method of claim 25 wherein:

only one of the the active PPG and the protect PPG pass through the intermediate node.

27 (New): The method of claim 25 wherein:

each of the the active PPG and the protect PPG pass through the intermediate node.

28 (New): The method of claim 21 wherein:

the traffic comprises at least one of Time-Division-Multiplexed ("TDM") traffic, Asynchronous Transport Mode ("ATM") traffic, and Multi-Protocol Label Switched ("MPLS") packet traffic.

29 (New): The method of claim 21 wherein:
the MPLS traffic comprises Internet Protocol traffic or Packet Over SONET traffic.

30 (New): The method of claim 21 wherein:
each of the nodes comprises one of an Add-Drop Multiplexer ("ADM"), an ATM switch, and a Label Switching Router ("LSR").

31 (New): The method of claim 21 wherein:
the detection of failure is performed by detecting one of a loss of signal ("LOS"), a loss of framing ("LOF"), and a bit error rate ("BER") in excess of a given threshold value.

32 (New): The method of claim 21 wherein:
the network includes a transport layer comprising at least one of a synchronous digital hierarchy ("SDH") layer, a synchronous optical network ("SONET") layer, a direct wavelength division multiplexing ("WDM") layer, and a Gigabit Ethernet layer.

33 (New): The method of claim 21 wherein:
the PSS is transmitted on at least one of the active PPG and the protect PPG.